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Keeping up with change - Quazar streamlines IT services, alleviates workload, ensures compliance and cyber secures vessels

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September 2021

Maritime ICT Challenges

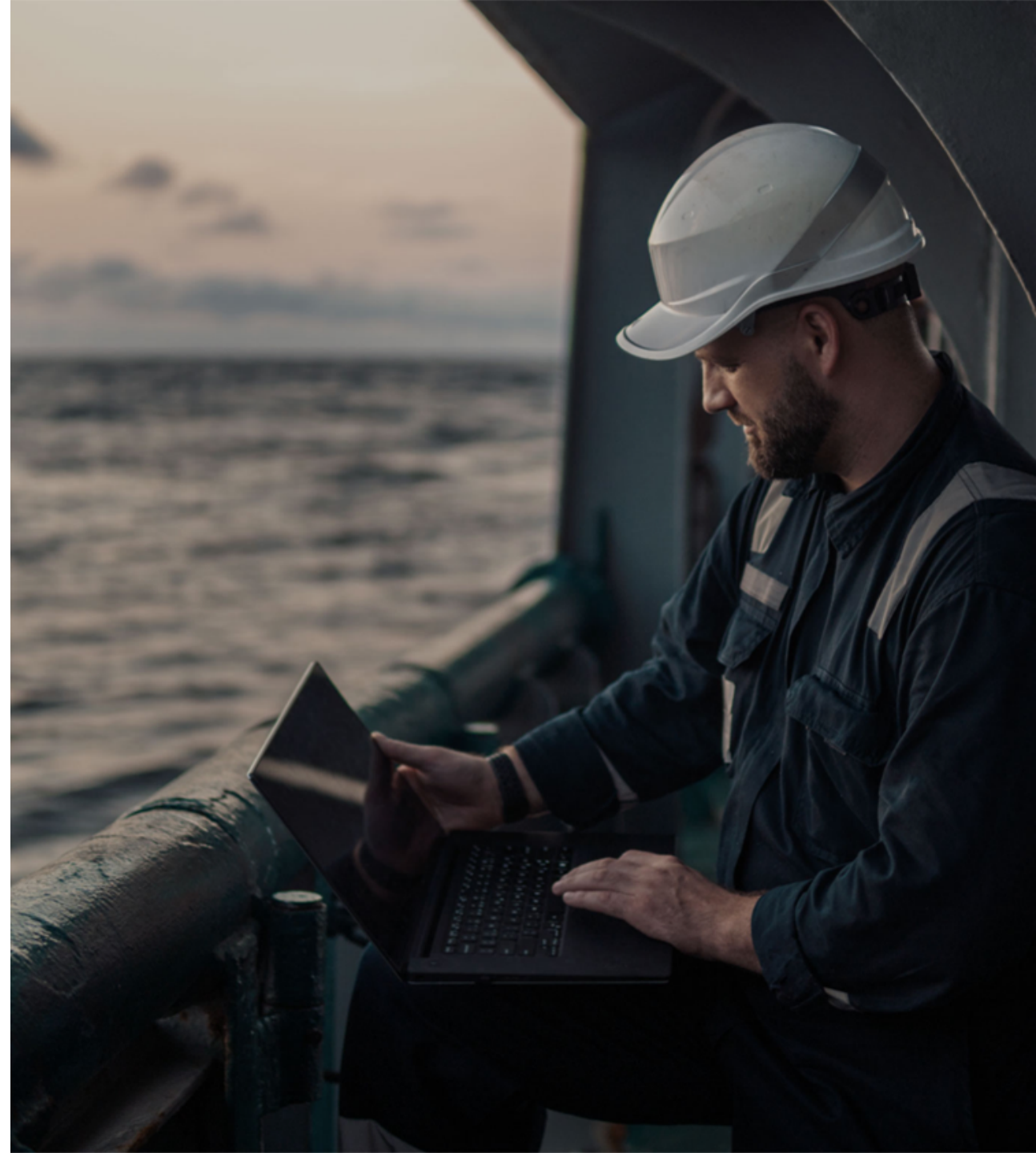- **Digitalization is key to competitiveness**

optimizing operations, complying with regulations, reducing cost and creating efficiencies

- **Lack of resources**

to implement required solutions while keeping up with the evolving digital marketplace

- **An expensive problem to solve**

increasing fixed costs of hiring new highly skilled IT staff

The Solution: QUAZAR

A new way to **acquire, install and maintain** a complete vessel IT infrastructure including:

- All onboard IT **hardware and software**

- **24/7 IT management and support** by a personal IT manager backed up by a dedicated team of IT specialists

- All for **one fixed monthly fee** per vessel

More solutions, more support, less cost!
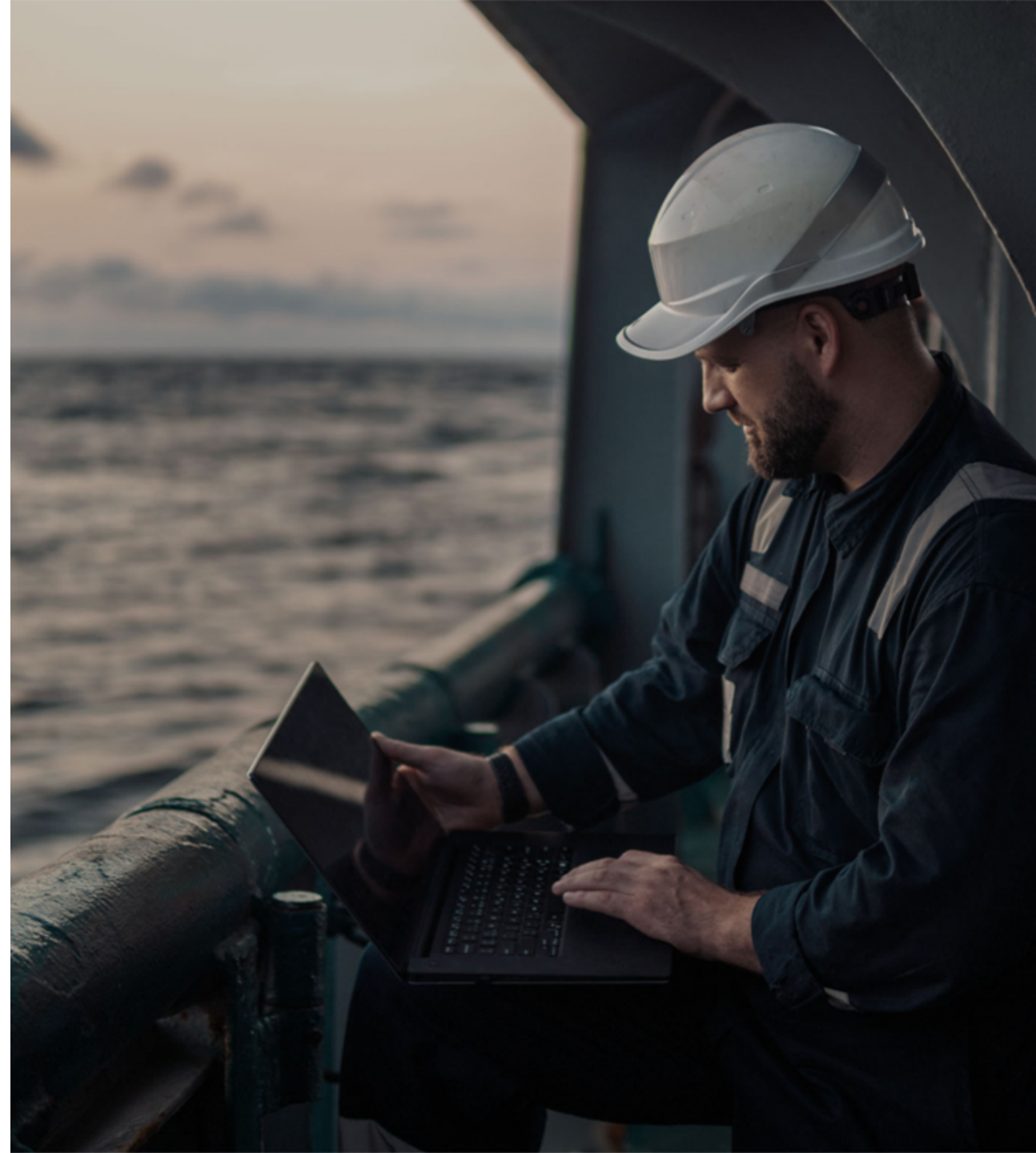
Quazar Concept

A decentralized Enterprise Architecture where operations , practices and processes are governed by IT Service Management (ITSM) Framework which is based on ITIL, NIST, and IMO guidelines.

Quazar provides a **personalized experience with significant cost and time efficiencies** in order to turn today's burden into tomorrow's innovation.
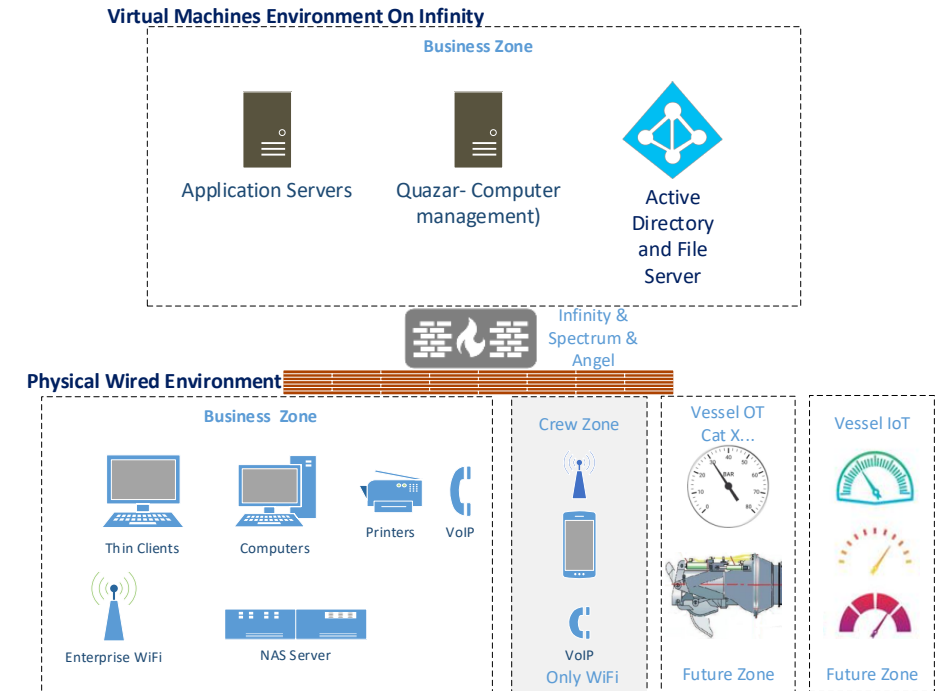
Quazar Technology and design

Quazar combines **tools developed in-house** and from **world-class technology providers**.

- Computer and server infrastructure
- Network Attached Storage (NAS)
- Backup data protection
- Thin clients \ remote desktop services (RDS)
- Security controls
- Enterprise wireless infrastructure
- Printing infrastructure
- Remote diagnostics and monitoring
- Full Infinity functionality

Virtual Machines Environment On Infinity

Business Zone

Application Servers | Quazar- Computer management) | Active Directory and File Server

Infinity & Spectrum & Angel

Physical Wired Environment

Business Zone

Thin Clients | Computers | Printers | VoIP

Enterprise WiFi | NAS Server

Crew Zone

VoIP Only WiFi

Vessel OT Cat X...

Future Zone

Vessel IoT

Future Zone

The Quazar Platform – The start of an Enterprise Architecture

The platform consists of:

- Infinity+ or Cube for Redundant hardware onboard, based on Dell servers

- Spectrum, for complete asset management, compliance and maintenance

- Microsoft Active Directory and File services Management

- Computer management platform (powered from Intel)

- Private cloud hosting ADs and FS at the HUBs, enabling Fleetwide Domain service Implementation, Management and Maintenance as well as Universal (Fleetwide) Security Policies

All managed by your Personal IT Manager, L2 system admins and system core engineers.
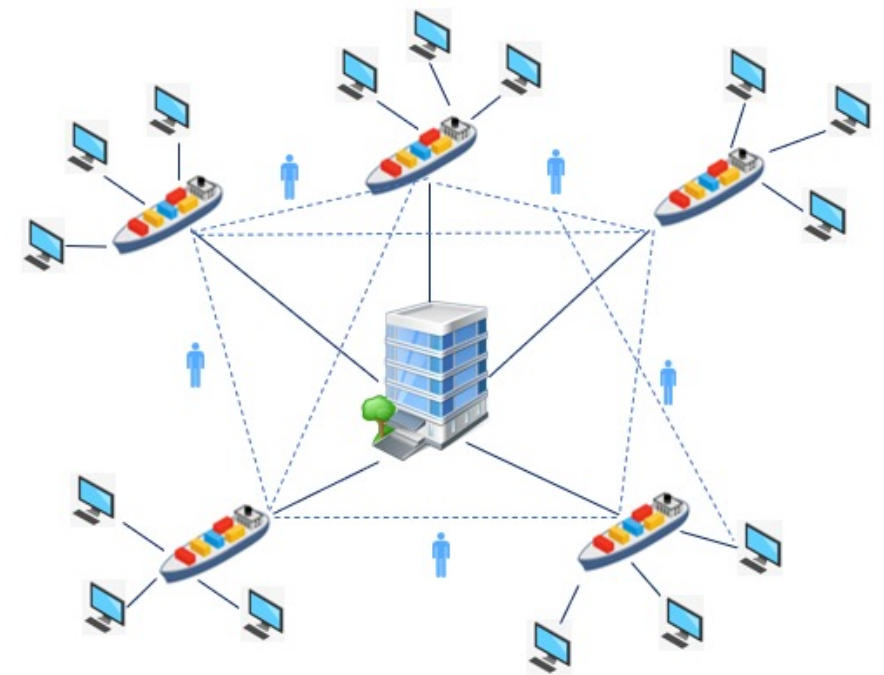
Enterprise Architecture Advantages

- **Creating Insights and Overviews of Relations and Dependencies**

- **Impact of Change Analysis (What-if Scenarios)**

- **Standardization and Risk Mitigation**

- **IT Cost and Complexity Reduction**

- **Process and Capability Improvement**

- **Enabling Innovation**

- **Strategy and Transformation Realization**

- **Security Gains**

The IT Service management Framework

HOME   SOLUTIONS   TICKETS   SERVICE CATALOG   EMPLOYEE ONBOARDING

SERVICE CATALOG / IT SERVICE REQUESTS / MAINTENANCE SERVICES

Maintenance Services

Service : Routine Maintenance

Summary : Health checks, Updates, minor corrections and patches in the ICT environment

Detailed description : Maintenance works for Quazar infrastructure such as servers, computers, NAS, WiFi and applications. Maintenance works include from patches, OS updates, and others in order to maintain that the systems are up to date and also to verify the health status of them.

Features

- Request for Server maintenance
- Request for NAS maintenance
- Request for Wifi Maintenance
- Request for Computer's maintenance
- Request for Thin Client maintenance
- Requests for Spectrum works including alerts, updates and others.

Service applicable for : Appointed by the Maritime Organization Officer or the personal Navarino IT Manager

Approvals : The service needs approval from the Company's appointed IT Admin or Navarino's Personal IT manager

Dependencies / Requirements : The service is offered for the vessel's Quazar standard or enterprise version infrastructure

Hours of Availability: Service is scheduled through pre-defined maintenance windows after co-ordination with the master of the vessel if it is service affecting.

How to request : Please use this request form, or call the Navarino Digital Service Desk. For more information about this service, please select **Solutions** and browse the **Knowledge Articles and FAQ** Section.

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Identity Management

Identity Management

Password Reset & User Acco...

Vendor Remote Access

Vendor Remote Access

request for remote access

- **Based on ITIL, NIST, IMO guidelines**

- **Follow strictly the BV NR659 which address all modern needs of today in Maritime.**

- **Complete service management portal and a service catalogue for IT operations, Network operations and Security Operations.**

solutions

Documentation and Risk Profiling.

OVERALL RISK ASSESSMEN

Your overall risk rating is   MEDIUM

Your overall rating for this assessme
threats that would negatively impac
recommendations and remediate as

TOP RISK AREAS

Critical   PR.AC-4 - Access per
privilege and separatic

Critical   ID.RA-3 - Threats, botl

Critical   PR.AC-2 - Physical ac

Critical   DE.AE-2 - Detected e

Critical   PR.IP-1 - A baseline c
is created and maintai
functionality)

PR.AC-4: Access permissions are managed, incorporating the principles of least privilege and separation of duties   **Critical**

Q: Do you limit access to data for your employees?

A: No, employees have access to all data

Importance:
Data is a vital element of your business and employees should only have access to the data they need to perform their jobs. Information such as salaries, earnings, performance reviews, marketing plans, and intellectual property can have a detrimental outcome if obtained by a competitor or disgruntled employee. Regulatory information such as PII, PHI, and Financial Information can lead to fines and an almost certain impact on your company's reputation.

Remediation Steps:
You should limit the access your employees have to the data they need to do their job. Consider revoking access to data not needed for them to do their jobs and monitor their use to ensure you are practicing a least-privilege model.

ID.RA-3: Threats, both internal and external, are identified and documented   **Critical**

Q: Are potential impacts from third parties identified and documented?

A: No

Importance:
Some of the largest data breaches to date have come as a result of a third-party contractors inability to protect their environment. Practices should be in place to ensure you know your risk of doing business with external entities.

Remediation Steps:
You should immediately create an inventory of your vendors, review your contracts for obligations to protect your data, and perform a risk assessment across your inventory so that you can determine the risks to your business.

- ▪ **A complete Blueprint of the infrastructure as High-level design / Cyber Repository.**

- ▪ **Cyber Security Policies**

- ▪ **Cyber Handbook**

- ▪ **Criticality and Risk assessment**

- ▪ **NIST profiling**

- ▪ **DW email domain scanning.**

Reports
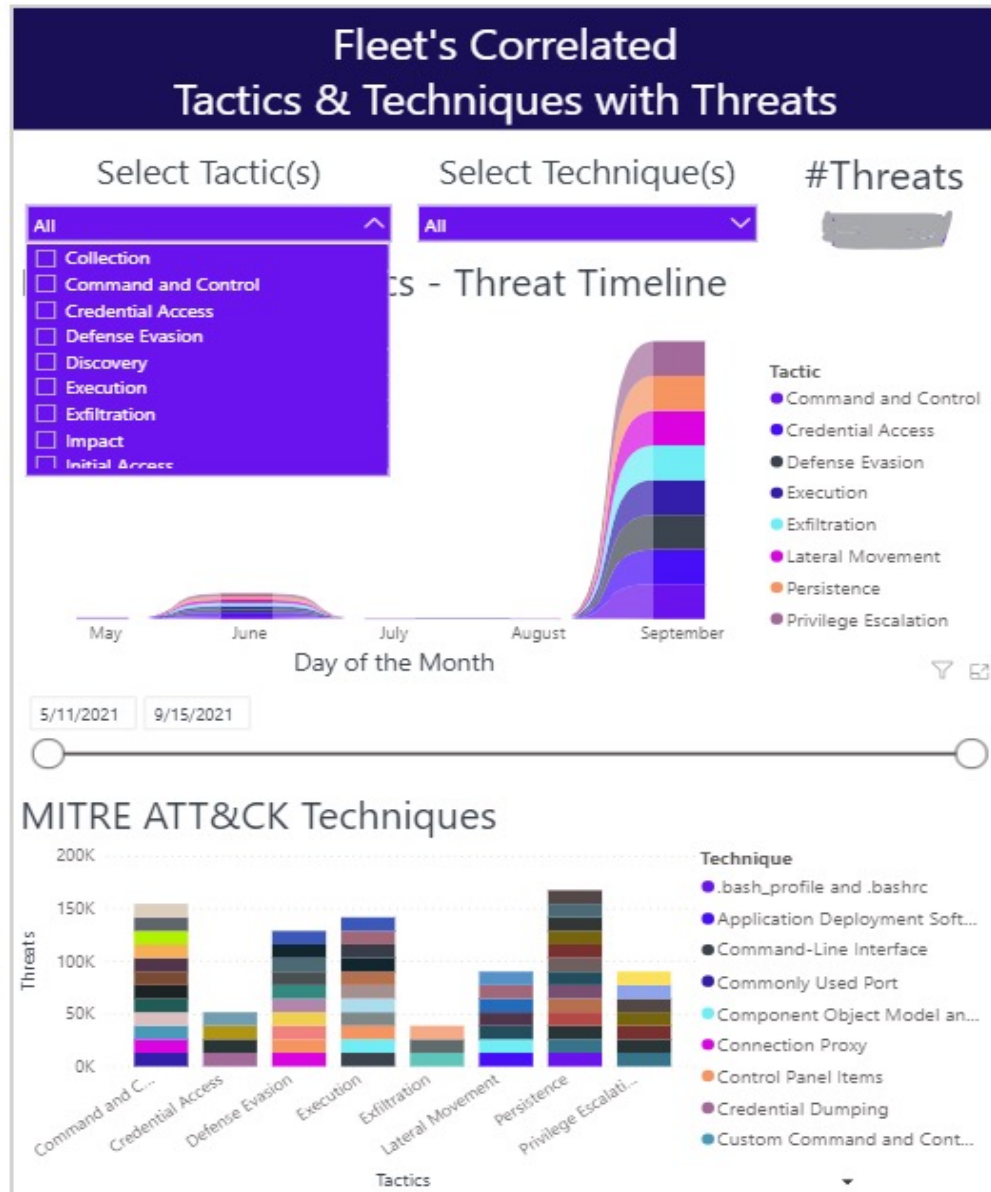
- **IT operations and Service management reports**

- **System's Health status**

- **User's Account status and logins.**

- **System's Cyber status**

- **Cyber Security assessments.**
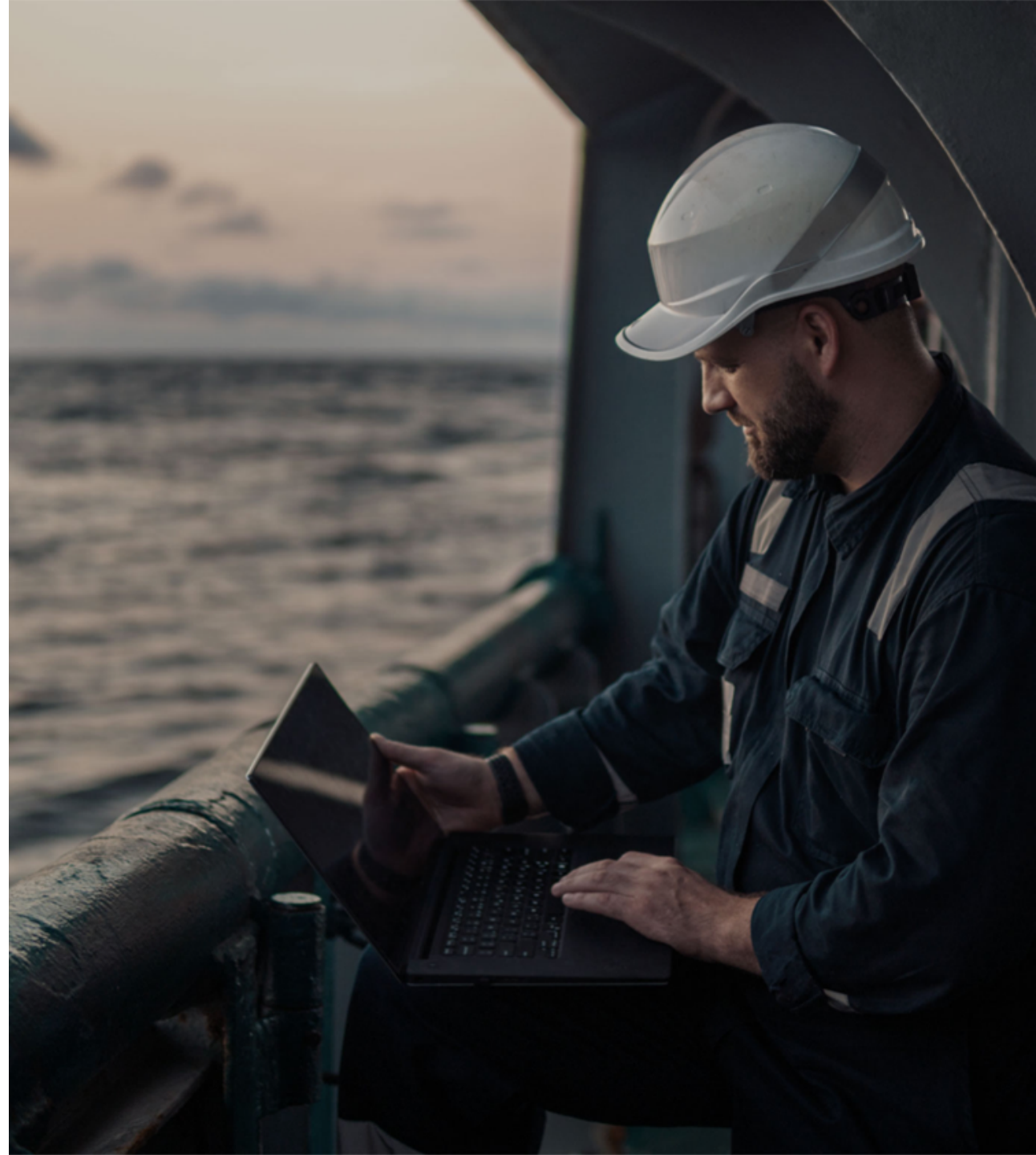
Cost efficiencies and cost variabilization

- **Economies of scale**

- **Rental / Lease to own or even selective one-offs**

- **No Capex for hardware or software**

Benefits

- Cost Efficiencies

- Peace of Mind

- Standardization

- Cyber Security

- Compliance

- Free up Resources

Thank you.

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Here is the video link.

Navarino Quazar Video - YouTube